

Abstract

The invention relates to a cooling system with pulse-width triggering for the operating elements on the valves of the thermostat being subjected to closed-loop control in an adaptive manner. The aim is to reach the required temperature level in the coolant circuit as quickly as possible initially by predetermined and stored basic adaptation, taking into account the current ambient temperature. Depending on the load state and ambient conditions, three different temperature levels are provided as desired variables for setting the coolant temperature. Once the currently required coolant temperature is reached for the first time after starting, closed-loop control is changed over to fine adaptation. The coolant temperature which is currently to be set is kept as constant as possible by fine adaptation as a function of the desired temperature and the external temperature. If the desired temperature of the coolant, which temperature is to be achieved by closed-loop control, changes on account of a change in the load state of the engine, the newly required temperature level is set by fine adaptation. This has the advantage that, when the motor vehicle is started, the coolant temperature which is currently to be set can be achieved immediately by the basic adaptation settings.